

MARINE REVIEW.

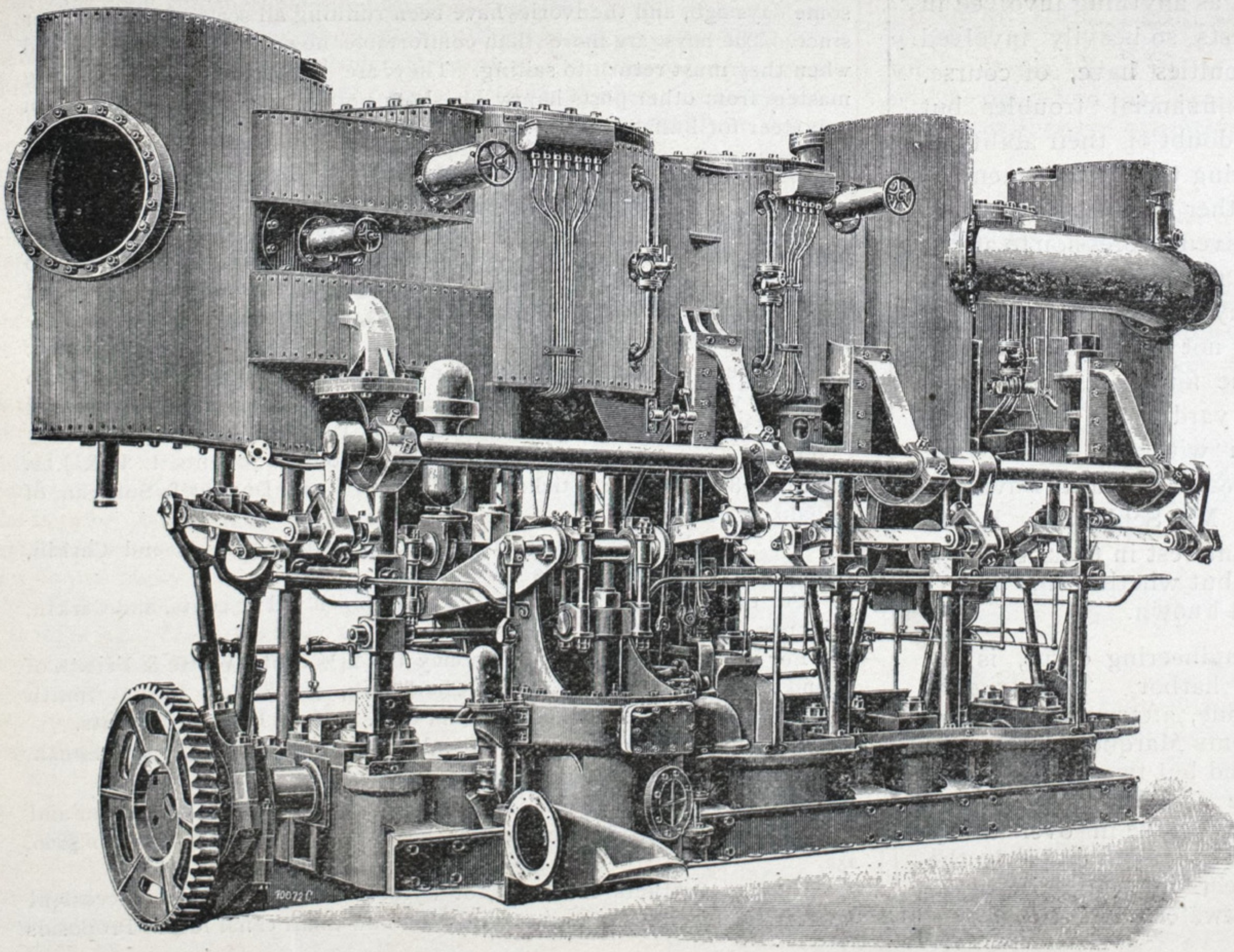
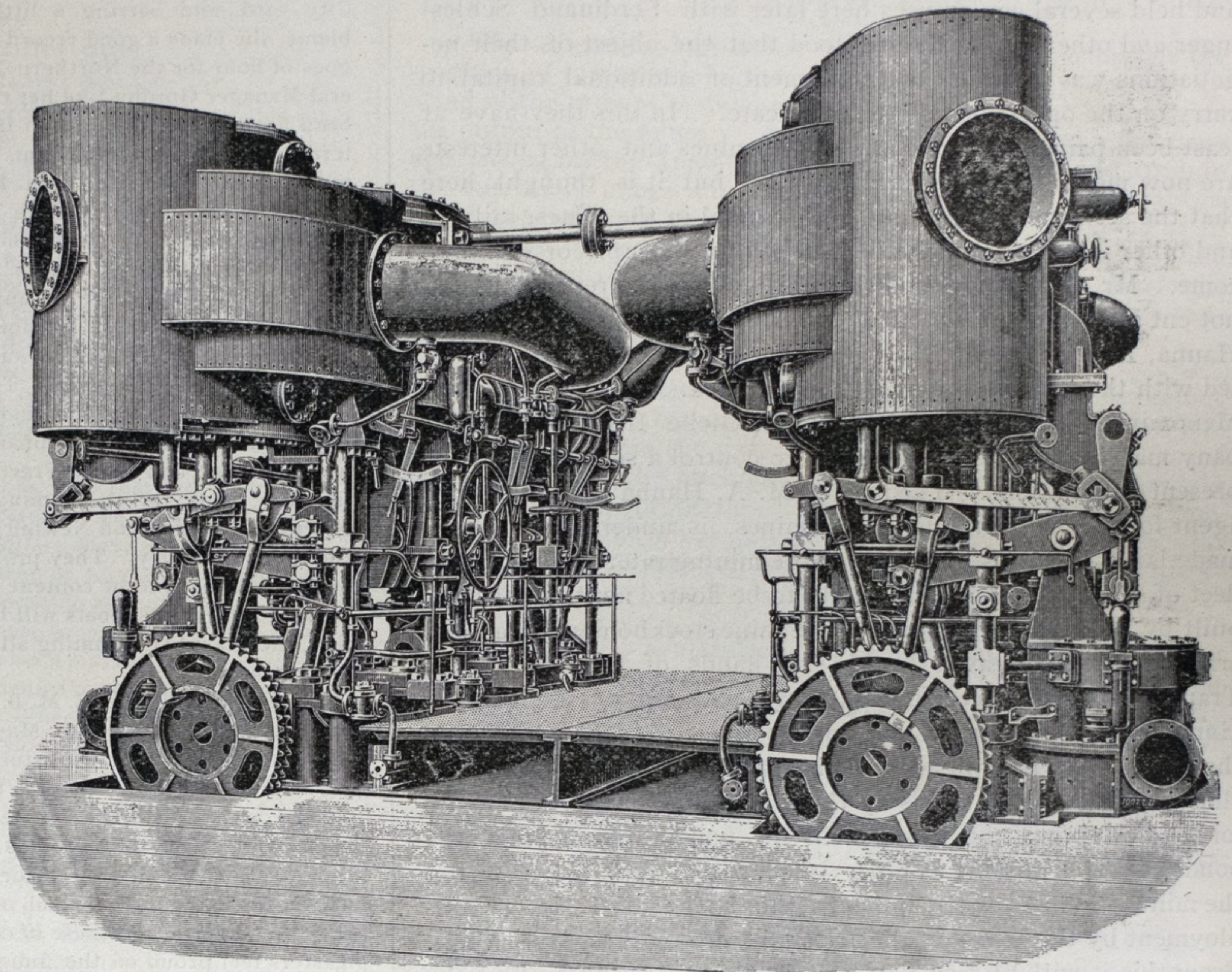
VOL. III.

CLEVELAND, OHIO, THURSDAY, JANUARY 29, 1891.

No. 5.

Engines for a Japanese Cruiser.

Engravings on the first page show the engines of the Japanese cruiser Chiyoda, built by J. & G. Thompson, of Glasgow, Scotland. We are indebted for these engravings to the Railroad and Engineering Journal of New York. The engines are vertical, inverted triple expansion, one to each screw, and are arranged so as to give a strong structure for the minimum of weight, and at the same time to make all the working parts easily accessible. The cylinders are supported by steel columns bolted to a cast steel bed plate. The cylinders are 26 1/2 in., 39 in. and 57 in. in diameter with 27 in. stroke. They are all fitted with piston-valves worked as shown in the engraving from eccentrics placed on the main shaft, driving links. The air-pumps are worked from the low-pressure crosshead. When running at full speed these engines will make 230 revolutions



per minute. Steam is supplied by six locomotive boilers placed in two separate water-tight compartments forward of the engines. The boilers are of steel, and are 7 ft. in diameter and 18 ft. long, each having two fire-boxes. Forced draft is applied on the closed stokehold system, and the boat is expected to make nineteen knots an hour. She is 310 feet long, 42 feet beam and 23 feet 8 inches hold. Her mean draft is 14 ft. and displacement 2,450 tons. The Chiyoda's engines, although very powerful and of improved design in every way, do not entitle her to distinction as to speed. She will, however, rank with the first class cruisers now being built in different parts of the world. The hull construction and the armament of the boat are in every respect fully equal to similar features in the modern cruisers of the United States and England. It is to be hoped that such vessels will soon be built in this country for foreign governments.

The Schlesinger Tangle.

The newspapers of Milwaukee and the upper peninsula of Michigan, are doing a great deal of guessing as to who will own the railway recently built into Escanaba by the Schlesinger syndicate. That the control of the road as well as the control of other properties owned by the Schlesinger syndicate will pass into new hands there is no doubt, but it will probably be the middle of next month before anything definite is known of the new arrangements. When the Messrs. Hanna, of the firm of M. A. Hanna & Co., Cleveland, who have a leading interest in the outcome of the present difficulties, went east a week ago and held several conferences here later with Ferdinand Schlesinger and others, it was understood that the object of their negotiations was to secure the enlistment of additional capital to carry on the operations of the syndicate. In this they have at least been partially successful, as the mines and other interests are now meeting all urgent obligations, but it is thought here that the settlement regarding new capital in the mines, railway and other interests will not be reached for a couple of weeks to come. Mr. Schlesinger and the people whom he represents will not cut an important figure in the new deal. Messrs. M. A. Hanna, H. M. Hanna, L. C. Hanna and others who are interested with them in the concerns known as M. A. Hanna & Co., Menominee Transit Company and the Globe Iron Works Company may be expected, of course, to control a settlement of the present negotiations. The firm of M. A. Hanna & Co., as sales agent for the Chapin and other mines, is understood to have made large advances of money to the mining interests, while the fleet of six steel steamboats, ready to be floated next season, was built by the Globe company for the mine stockholders on a bond arrangement that leaves them in the hands of the Menominee Transit Company, a corporation also made up of the Messrs. Hanna and others, until such time as the contract under which they were built is fulfilled. This contract is understood to include the issuance of bonds by the Menominee Transit Company for the building of the boats, with an understanding that the bonds, bearing interest at 6 per cent., were to be taken up by the mines in ten annual payments, the boats to be given employment by the mines in the Escanaba ore trade at \$1.10 a ton. From this it will be seen that a settlement of the affairs of the transportation company is as important as anything involved in the present negotiations. These interests so heavily involved in a settlement of the Schlesinger difficulties have, of course, had some trials during the recent financial troubles but there was not at any time the slightest doubt of their ability to meet the situation, the only question being the arrangement of a settlement that would accrue still further to their advantage. The interested parties have at no time given expression to any of the plans under consideration, and it is not known whether the contract with the transportation company owning the boats will continue in full force with the mines or not but it is reasonable to suppose that it will. As regards the four boats building at Capt. James Davidson's West Bay City yard it can be definitely stated that they will have no connection with the boats to be controlled in the office of M. A. Hanna & Co. Capt. Davidson had some sort of an understanding with Mr. Schlesinger before they were built, probably for a partial interest in them through which they were to secure ore to carry, but whether this understanding will be carried out or not is not known.

Lieut. G. D. Fitch, United States engineering corps, is engaged in making a survey of Marquette harbor. The original chart was made by Capt. George G. Meade, afterwards General Meade, of Gettysburg fame, and represents Marquette with only about 200 buildings of all descriptions and but two docks. The result of the present survey will be added to the former changes and improvements that have been made in over thirty years. The purpose of the chart is to aid boats in entering the harbor and to assist United States engineers in locating improvements, such as lighthouses and the breakwater.

Line Boat Charters—Buffalo Gossip.

Special Correspondence to the MARINE REVIEW.

BUFFALO, N. Y., Jan. 29.—That \$100,000 libel suit of Wheeler against Davidson is causing not a little interest here, where Capt. Davidson long resided and Congressman Wheeler is well known. Judging from Capt. Davidson's talk here, local vessel men are inclined to think that Mr. Wheeler will not recover any great amount of damages. What Capt. Davidson said elsewhere is another matter. It looks as if both gentleman soon would have plenty of time for lawing—shipbuilding will be slack enough. The suit, if ever tried, will bring forth lots of notoriety, if nothing else. Mr. Wheeler has many staunch friends at this port, anyway.

From Wheeler to the fine steel steamship Emily P. Weed is an easy transition. She was the first metal freight carrier built at the West Bay City yard, and barring a little trouble for which no one really was to blame, she made a good record last fall. She brought down two full cargoes of flour for the Northern Steamship Company, and so well did General Manager Gordon like her carrying and handling facilities that he has been figuring on running her in his line all of next season. If not chartered outright for a lump sum, a freight arrangement probably will be made with her owners. Capt. Frank Welcome, who sailed her last fall, will go on the steamer Fedora, of Erie. He had some disagreement with Managing Owner Woodruff, and did not close the deal for a small interest in her. Mr. Woodruff says he has a stack of applications for her command, but will not make an appointment at present. If the Northern Company takes her Mr. Gordon may want to name her master.

One thing is certain—no such figures will be paid for charters as prevailed the past two seasons. The outlook is that there will be more tonnage than freight, and line managers are about as shrewd as other vessel men. The Lackawanna company, which owns only the Scranton, Lackawanna, Russia and Grand Traverse, has not yet made a move toward leasing any boats for the coming season. Last year they chartered the Florida, Wyoming and Newburgh, and had a freight arrangement with the Saginaw Valley. They probably will want some outside tonnage, but owners will have to be content with less charter money. According to present indications, boats will bring from 8 to 10 per cent on their valuation, the charterer assuming all expenses. That's a good return for a dull season, however.

The Buffalo lodge, E. M. B. A., has been made happy once more. A few days ago Capt. Thomas Maytham, the well known tug owner, walked Secretary Todd to a bookstore, and between them they selected about 400 volumes—fiction, history, travel, biography, science, sea stories, and so on, and topped the whole with a huge Webster Unabridged. The books were carried to the rooms of the lodge, and Capt. Maytham paid for them all. The donation made a full cargo for the handsome bookcase which the boys already had on hand. Many of the volumes relate to shipping affairs, and these of course serve a double use. Certainly, the masters feel proud of the fine gift, and more than thankful to the generous donor. The billiard table presented by James Ash was put in place some days ago, and the ivories have been running all sorts of courses ever since. The boys are more than comfortable now, and they will feel bad when they must return to sailing. They are prepared to make visiting masters from other ports happy on short notice. Give them a call when you steer for Buffalo.

Bids on Hay Lake and Sault Canal Work.

Special Correspondence to the MARINE REVIEW.

DETROIT Mich., Jan. 29.—At Gen. Poe's office, Monday were opened proposals for excavating and rock-blasting on Hay lake channel, and Soo river. The extent of the channel to be improved is about six miles, and the work will cost the government nearly \$2,000,000 when completed. The work is divided into six sections, and the following bids were received:

For the first section, John Hickler & Son, of Sault Ste. Marie, bid \$1.20 per cubic yard; L. P. & J. A. Smith, Cleveland, \$1.50; Carkin, Stickney & Cram, of Saginaw, \$1.47½, and C. F. & H. F. Dunbar, \$1.27.

For the second section, John Hickler & Son bid 70 cents. L. P. & J. A. Smith, 74 8-10; Carkin, Stickney & Cram 68½ and Dunbar & Sullivan, of Buffalo, 57 cents.

For the third section, L. P. & J. A. Smith 16.9 cents and Carkin, Stickney & Cram, 14¾ cents.

For the fourth section, L. P. and J. A. Smith bid 17 cents, and Carkin, Stickney & Cram, 13 cents.

For the fifth section James Rooney bid 14½ cents; White & Friant, of Grand Haven, 15.9; L. E. Allen, of Charlevoix, 46 5-8; L. P. & J. A. Smith 16, Carkin, Stickney & Cram 14¾, and C. F. & H. F. Dunbar, 14 cents.

For the sixth section, L. E. Allen, bid 46 5-8 cents; L. P. & J. A. Smith, 19 9-10, and Carkin, Stickney & Cram, 14¾ cents.

The result of the competition will be forwarded to Washington and awards made there. The amount of the lowest bids for the work is \$866,252.

Hughes Brothers & Bangs, of Syracuse, N. Y., are the successful bidders for the work of constructing the new Sault canal lock. Proposals

for furnishing all of the materials and labor and building the masonry of the lock, a work of the greatest magnitude of its kind in the country, were received at the office of Gen. Poe, Tuesday, and a computation of the bids, which were divided into eight different classes, shows Hughes Brothers & Bangs to be the lowest at \$1,268,500. Collins, Farwell & Adams, of Detroit, are next at \$1,294,250, and the others range all the way up to \$1,595,750. Other bidders were: Henry A. Sanger, Joliet, Ill.; Carlin, Stickney & Cram, Saginaw, Mich.; Soule & Raynor, Syracuse, N.Y.; Zimmerman & Truax, Duluth; Collins, Farwell & Adams, Detroit; John Hickler & Son, Buffalo; Angus & Gindelle, Chicago; Connolly & Neelon, Oil City, Pa., and St. Catharines, Ont., and Noble, Griffin & Davock, Detroit. By accepting the lowest bids in each section the total expense would be \$955,350.

Wheeler-Davidson Libel Suit.

Special Correspondence to the MARINE REVIEW.

WEST BAY CITY, MICH., Jan. 29.—The greatest sensation of the year has been sprung by Congressman Wheeler, who has begun suit against Capt. James Davidson for \$100,000 for libel. Mr. Wheeler's attorneys are Hanchett, Stark & Hanchett, of Saginaw. The first papers in the case were served on Capt. Davidson, Saturday afternoon. Mr. Wheeler alleges that by statements made by Mr. Davidson regarding the financial condition of the firm of F. W. Wheeler & Co. their credit has been injured to a great extent. He states that Mr. Davidson has told parties that the firm would not be able to pay fifty cents on the dollar of their indebtedness; that certain of the creditors were being frozen out, while favored ones were securing mortgages on the property of the firm. These statements and many others, he says, have been made to business associates in Detroit, Buffalo, Chicago, and elsewhere.

In an interview Mr. Wheeler says: "It is true that our firm owes a great deal of money, but we are perfectly solvent. An inventory of our assets shows that we have a half million dollars above all indebtedness. I can build just as good ships and just as cheap as any other shipbuilder on the lakes, but I cannot stand such dishonorable assaults as have been made upon me by Mr. Davidson and I propose to make him prove these things, or else show to the public that he has been making false statements to injure my business." Captain Davidson denies in toto the charges that he has done anything to wilfully injure Mr. Wheeler's credit or his business. When asked about the concern by outside parties he had said all he knew about their financial condition was from the commercial reports, which it was true were not very flattering. "I don't propose to be bulldozed in this matter," he said, "and I will tell you that it will take five years for this case to be settled." The suit is one that will attract a great deal of attention, both at home and abroad.

The Goodrich Boats are Well Cared For.

Special Correspondence to the MARINE REVIEW.

MANITOWOC, Wis., January 29.—The Goodrich Transportation Company has done considerable re-building and repairing at this place during fall and winter. The side-wheel steamer Chicago and propeller Menominee have been rebuilt, and considerable work of a like character has been done on the Sheboygan. The tug Arctic is now undergoing extensive repairs. Fifty-two ship carpenters and joiners have been steadily at work on the company's boats during the fall and winter and a force of eighteen men has been at work under the direction of the chief engineer. Twenty-five painters will be put at work next week and they will be kept busy until the opening of navigation. The total cost to the company of repairing, re-building and fitting up will exceed \$60,000.

A movement is afoot to induce the lighthouse board to put in a steam fog whistle on the north harbor pier, as the bell in use at present can not be heard a sufficient distance.

Business in the shipyards at this place is not as active this winter as in the past, although considerable repair work is being done. Burger & Burger are building a tug for Truman & Cooper, of this city, to be completed May 1. Her dimensions are 76 feet over all, 18 feet beam, and 9½ feet hold. She will have a high pressure engine 22x24 and a boiler 7½x12. She is to be used at Ashland for general towing. The same firm has just completed extensive repairs on the schooner Naiad. A new keelson, a new center board box and deck were put in. Her bottom has been caulked. The schooner is always kept in excellent repair and though built in 1864 still rates A2. The tug Elmer, of Manistique, is in the boxes receiving new stanchions, top side plank, fender strakes, plank-sheer, stringers, rails, monkey rails fore and aft, deck frame and decks and tow posts. She will have her house rebuilt and will be caulked all over and ironed. The firm has several other repairing jobs in view.

Next summer the drydock will be enlarged. The gates will be made ten feet wider and will then measure forty-five feet. Sixty feet will be added to the length of the dock and its dimensions will then be 60x320. The schooner L. B. Coates is being repaired by the owners, Burger & Burger furnishing the material. She is receiving new stanchions, plank sheer, stringers and rail, windlass and bitts, and will have the top sides recaulked. She will be changed into a three master.

Iron Mining.

VALUE OF LEADING STOCKS.

Quoted by Chas. H. Potter & Co., No. 104 Superior St.

Stocks.	Par Value.	Bid.	Asked
Cleveland Iron Mining Company.....	\$ 25 00	\$ 16 00	\$ 18 00
Champion Iron Company.....	25 00	90 00	100 00
Chandler Iron Company.....	25 00	39 00	40 00
Chicago and Minnesota Ore Company.....	100 00	110 00
Iron Cliffs Iron Company.....	50 00	125 00
Jackson Iron Company.....	25 00	90 00	100 00
Lake Superior Iron Company.....	25 00	68 00	70 00
Minnesota Iron Company.....	100 00	70 00	80 00
Pittsburg Lake Angeline Iron Co.....	25 00	145 00
Republic Iron Company.....	25 00	26 00	28 00
Michigamme.....	25 00	8 50	10 00

The Minnesota legislature may be expected to consider the question of taxing mining companies and mining properties instead of the present method of levying a tax of 2 mills a ton on the output of the mines. A resolution was adopted a few days ago calling for the appointment of a committee to inquire into the number of mines and mining companies and corporations now in operation in the state; quantity, quality and value of all ore and coal mined, shipped and sold by each during 1889 and 1890; value of all property owned and used in their business; amount of taxes paid by them and manner and rate of such taxation.

Two men well known in the Lake Superior mining region, David M. Ford, of Ishpeming, and Capt. Charles Cox, of Ne-gaunee, died within the past week. David M. Ford was managing director of the Michigan Gold Company and was largely interested in iron properties. He was sixty years of age. Capt. Cox was a skillful miner and was in charge of the Cambria and Lilly mines at the time of his death. His death was unexpected.

Mr. S. P. Ely's attention to Cuban iron mining matters necessitated his resignation as president of the Republic Iron Mining Company at the annual meeting in Cleveland last week, and Mr. D. Rees, who has been secretary of the company for some years, was elected to the presidency. Other officers are: H. B. Perkins, vice-president; W. B. Castle, secretary; Douglas Perkins, auditor and Messrs. S. P. Ely, H. B. Perkins, G. W. R. Matteson, C. G. Hickox, J. V. Painter, Joseph Perkins, Peter White, Samuel Mather and W. D. Rees, directors.

The Norman Mining Company, composed of Michigan mining men and controlling the Monongahela mine, northeast of the Republic, has elected officers as follows: P. B. Kirkwood, president; Ira A. Clark, secretary and treasurer; C. B. Kirkwood, E. C. Anthony, A. C. Seass and Norman McLeod, directors. A renewal of the Monongahela Mining Company's option will be offered to that company but, if it is not wanted, the owners will begin operations with a diamond drill early in the spring.

The Houghton Mineral Land & Iron Company, controlling the Hamilton and other partially developed Lake Superior properties, elected the following officers at its annual meeting held at Sharon, Pa., recently: George W. Johnson, Newcastle, Pa., president; R. W. Williamson, Sharon, Pa., secretary and treasurer; George W. Johnson, P. L. Kimberly, R. Williamson, John T. Jones and J. R. Devereaux, directors.

A good vein of ore has been struck at the Elba mine, Ne-gaunee. It is similar to that taken from the East Range mine, having a greasy appearance and crumbling like black lead and is expected to assay 65 per cent. in metallic iron.

The Chapin mine put in drifts and sunk shafts last year that measure about eight miles in length.

The secretary of war has transmitted to congress a report from Col. O. M. Poe, of the corps of engineers, upon the preliminary examination for a ship channel in the shallows of the connecting waters of the lake between Chicago, Duluth and Buffalo, made in accordance with the river and harbor act of 1891. The estimate of the cost is \$2,379,085 for a twenty-foot channel, and \$3,339,567 for a twenty and twenty-one-foot channel, the latter depth to be made wherever necessary in localities subject to heavy seas. Three hundred feet was assumed as the minimum width of the channel at any point except St. Mary's Falls canal.

Col. Ludlow on the Question of a Re-Survey.

EDITOR OF THE MARINE REVIEW: I have observed some of the newspaper comments touching the matter of a re-survey of the lakes, to which you invite my attention, and willingly admit that I am never more forcibly convinced of the power and liberty of the press than in reading current disquisitions on technical matters. It is much easier to find fault than to commend, and to criticize intelligently is more difficult than either. The survey of the northwestern lakes, made under the direction of the United States corps of engineers, is unexcelled in accuracy and completeness by any similar work in the world. The geodetic determinations are as definite and precise as the best instruments and the skill of trained and accomplished observers can make them, and there can be no need whatever for further work in this direction, until some change is wrought in the form and distribution of the earth's surface. Up to date there is no reason to believe that this has happened.

While the contours of the land and the topography remain unaltered, the hydrography is modified from time to time, in special localities, by shore constructions, such as piers and wharves, by the transfer or accumulation of loose materials, such as sand and boulders, and by the varying level of the lake at different seasons and in different years. A further differential variation is due to the increasing draft and dimensions of lake vessels, which reduce the water below the keel of a vessel drawing 19 feet, as compared with one drawing 12 feet. In a survey covering a large expanse of water, it is quite impossible to so multiply the soundings as that no guilty boulder could escape. Suppose, for example, that the surface of Lake Michigan were covered with soundings at the angles of squares of but ten feet. Even this minuteness of probing, the cost of which would be simply prohibitory, would enable such a boulder as that known as the Vienna rock, which was only about 5x6 feet and which was blasted out of existence last year, to remain undiscovered, until some unlucky keel should find it. So of numerous other cases. About three miles S. W. of the site of Vienna rock is a 19-foot sounding in water 40 feet to 50 feet deep. The sounding has been verified from the original notes of the survey, but I have vainly sought to recover the rock, although putting the vessel as directly upon the spot as sextant angles carefully taken could locate it. On the shoals bordering Point Peninsula, and in other portions of Green bay, such as the entrances and elsewhere, from time to time previously unknown dangers are disclosed. In some cases, no doubt, these have in a sense been created since the survey was made. For example, the open winter and low lake level of last year were followed by several discoveries of rocks. Unprotected by a covering of ice, the lake was naked to the storms, which disturbed it the more that its surface was abnormally low. The excessive agitation piled up vast accumulations of sand, and even disturbed large boulders from their resting places. The ice, too, when anchoring itself in deep water and subsequently moving displaces loose rocks at the bottom and tends to move them shoreward.

What is necessary, then, from my point of view—and I have considered the matter with care—is by no means such an undertaking as a general re-survey, but that all localities where new dangers are suspected to exist or have been disclosed in course of time, and largely by reason of the greater depth required for navigation, shall be re-examined and the results added to the charts. This, it will be observed, is a very different matter from a re-survey which would be a totally unnecessary and superfluous expense, and would result only in duplicating information already determined. So far as the charts themselves are concerned, they are drafted on the polyconic projection, which is recognized as one of the best standards and is used for the general American coast. No one contends that it can be improved for the purpose of lake navigation. Spherical surfaces cannot be truly represented on a plane surface. They must err either in dimensions or azimuth or in both. The Mercator charts, drawn with meridians parallel to each other, are useful for long voyages at sea, where a single course may be held for days and weeks together, simply for the reason that the Mercator gives true courses, but the distortion of distances is immense, and no Mercator's chart would be of service on the lakes by reason of the gross dislocation of the land areas. The polyconic projection is a scientific compromise, by which for the areas of the lakes, the errors in distances and courses are reduced to a minimum. In matters of detail, no doubt, the charts as actually printed could be improved. The plates from which they are printed are old and in many cases the lines are becoming obscure. The outlines of the land could advantageously be strengthened, and for my own service, I have found in addition the drawing in different colors of the 5, 10 and 15-fathom contours of depth to be of marked benefit in showing the trend of the deep water and by comparison the dangerous localities. Courses and bearings added to the chart, would increase its convenience and usefulness, as well as more frequent compass cards and the distinct location of all lights and fog signals. These, however, are matters of detail.

To conclude, what is desirable, in my judgment, is a thorough research of all localities known to be dangerous or doubtful; a re-survey of all localities where changes have been made in the foreshore by piers and harbor constructions, and the adding of this later information to the

charts, with the improvement of the charts by means of the addition of compass cards, courses, contours of depth, and aids to navigation.

WILLIAM LUDLOW,

Engineer 9th and 11th Lighthouse Districts.

Two Package Freight Liners.

Illustrations of two of the handsomest steel steamships on the lakes are presented in a supplement to this issue of the REVIEW. The Owego, belonging to the Union Steamboat Company, holds the speed record pennant while the Harlem, with her sister ship belonging to the Western Transit Company, has eclipsed everything in regularity and number of trips made last season. The Harlem cost \$250,000 and is considered a money maker. The Detroit Dry Dock Company, the builders, can consider her a piece of their best workmanship. April 8th the Harlem left Buffalo and the Hudson left Chicago at four o'clock, and with one exception they held to schedule trips, so that both were loading at either place for their last trips at the same time. Both boats made twenty-seven round trips during the season, two more than any other liners have made. Each boat handled during the season 102,500 tons. Thus these two line boats handled as much freight as a train of twenty cars could handle running every day in the year.

The Owego, a counterpart of the Chemung, is included in the supplement, on account of her speed. This handsome liner has eclipsed everything on that score for several seasons, and this season she lowered her own record to 16.4 miles per hour, on a run of 889 miles, from Buffalo to Chicago, made in fifty-four hours and fifteen minutes. On Lake Michigan 320 miles of this run was made in nineteen hours. The Owego and the Chemung were built by the Union Dry Dock Company and cost \$280,000 each. These fast line boats have built up a trade peculiar to their capabilities and have secured their immense carrying trade from the railroads rather than from other lake steamers. The Union Steamboat Company is really the lake division of the Erie Railway, while the Western Transit Company is the water connection for the New York Central.

Lake Superior Lights.

In answer to an inquiry from this office Col. William Ludlow, in charge of all light-house affairs above Detroit, says: "The acquisition of title for all lights for which appropriation has been made, is complete, with the exception of Two Harbors, Minn., and Devil's island, Wis. In these two cases the title papers are still in the hands of the district attorney for examination and certification. The changes to be expected in the vicinity of the Apostle group are, a light and fog-signal on Devil's island, the removal of the main light on Chequamegon island, about three-fourths of a mile eastward to where the fog-signal has recently been established, the construction of a harbor light and fog-bell at the inner S. W. end of Chequamegon island, and the construction of a harbor light at Bayfield, for which the board has made an estimate of \$5,000. These all are now awaiting action by congress. I recommended a light on Gull island, N. E. of Michigan island, in March last, but the item has not yet been included in the official estimates to congress.

Citizens Will Vote on the Proposed Portage Lake Bridge.

The board of supervisors of Houghton county, Michigan, has decided to submit to a vote at the general election to be held April 6, the question of bonding the county to the extent of \$45,000 for the purpose of constructing a second bridge across Portage lake between the cities of Hancock and Houghton. This action was anticipated in the last issue of the REVIEW when a drawing showing the site proposed for the bridge was presented. A free bridge is demanded by the citizens who are pushing the project, but it has been clearly shown that the structure, if erected, will be a great hindrance to navigation.

Around the Lakes.

T. J. Gibsen, formerly mate of the steamer G. G. Hadley, will be in command of the steamer Monohansett next season.

It is reported that the Wolf & Davidson Steamship Company declared a 10 per cent. dividend as the result of last season's work.

Ice is causing the dredges much trouble at Ashtabula and work on the Lake Shore ore dock improvements is not progressing rapidly.

The Detroit Vessel Owners' Association has also adopted resolutions calling upon the senate to pass the bill authorizing the construction of a tunnel under the Detroit river at Detroit.

At Algonac, Mich., there is being built a lumber barge for A. W. Comstock, of Alpena, which will be finished about March 15, will cost \$18,000, and have a carrying capacity of 600,000 feet.

The Wolf & Davidson Steamship Company, of Milwaukee, has elected officers as follows: W. H. Wolf, president; David Vance, vice-president; Frank R. P'ngree, secretary; Thomas Davidson, treasurer.

Capt. T. Donovan, of the Oswego tug M. J. Cummings, has purchased the schooners J. R. Noyes and American and will, it is said, make towbarges of them to go in the coal trade between Oswego and Canadian ports.

Milwaukee vessel owners have also adopted resolutions urging upon the senate the necessity of passing the bill authorizing the Detroit Railroad & Tunnel Company to construct a tunnel under the Detroit river at Detroit.

There is some probability that the steel steamer E. P. Weed may run in the Northern Line next season. That Line will keep up its connection with the Erie and Lackawanna roads, but Ward's Line will not carry any freight for it.—Buffalo Courier.

In a fog off Milwaukee last fall Capt. Oertling, master of one of the small Lake Michigan lumber carriers, ran down a fishing smack and one of its occupants was drowned. The vessel captain was charged with manslaughter but was acquitted by jury after a trial in Milwaukee last week.

The Toledo Transportation Company has elected the following officers: George G. Hadley, president; Frank M. Old, secretary; George H. Ketcham, treasurer; Capt. Charles Hubbard, manager; G. G. Hadley, F. M. Old, G. H. Ketcham, Charles Hubbard and C. E. Van Dusen, directors.

The Lake Michigan & Lake Superior Transit Company has settled the suit for damages done to the government breakwater of the harbor of refuge by the steamer City of Traverse during a fog prevailing in Milwaukee bay last season. A compromise was affected with the government for \$1,000.

A meeting of line managers is to be held here soon, when it is hoped that a good many vexed questions regarding the lake trade will be settled. The time is not set yet. The association formed by lake line managers last season came to nothing. It was never put into operation.—Buffalo Express.

An appropriation has been made for the purchase by the government of the Portage lake canals. The government has been prepared for some time to close the deal, awaiting the perfection of title by the owners. It is understood that the work of such perfection is now under way, and will be completed ere long.

The steamers of the Wolf & Davidson steamship Company's fleet will be commanded as follows next season: Fred. Pabst, Capt. Lewis Young, last season in the steamer Susan E. Peck; W. H. Wolf, Capt. Elmer W. Craine; Thomas Davidson, Capt. Jere Coleman; George H. Dyer, Capt. William Lund. Capt. D. P. Craine will command the new steamer now on the stocks at the Wolf & Davidson yard, and building for Thomas Davidson, W. H. Wolf and David Vance & Co.

The Delaware & Hudson Canal Company will blast the rocks out of the channel above the Erie elevator, Buffalo, and make an 18-foot waterway to its trestle above the Ohio street bridge. The work, which will be done by Hingston & Woods, is difficult, and will not be finished until mid-summer, but when completed it will relieve the company of the necessity of chartering light draught vessels for coal, or of topping out at some other dock everything that loads below 14 feet. The work will begin at once.

The American Steel Barge Company of West Superior, is said to have received from the New York office an order to begin the immediate construction of three more steel barges, to be duplicates of Nos. 109 and 110, and to be known as Nos. 115, 116 and 117. This means that each of the newly ordered vessels will be 265 feet in length, 36 feet beam, and 22 feet molded depth. The carrying capacity will be 3,000 tons.

It is said that there will be no active competition next season between the owners of the steamers Idlewild, Darius Cole and Greyhound on the Detroit Port Huron river route next season. The Idlewild will run between Detroit and Port Huron until June 1, when she will be transferred to the Detroit-Toledo route. On June 1, the Cole and Greyhound will begin running between Detroit and Port Huron, continuing to do so until October 1, when the Idlewild will return and finish the season.

The Milwaukee Evening Wisconsin figures on information from inside sources that in raising the propeller Philip D. Armour from the St. Clair river the general average expenses were \$46,459.21, of which \$40,000 was paid to Capt. Reid for floating the steamer and delivering her at Detroit. The particular average expenses, covering the outlay for repairs, etc., amounted to \$41,138.75. These two amounts added give a total of \$87,597.96 as the aggregate cost of raising the Armour and making all needed repairs. At the time she met with disaster her valuation was put at \$130,000. This makes the expenses of her recovery and restoration \$42,402.04 less than it would have cost to replace her with a new steamer. It is expected that the Armour-Marion case will come up for trial in the United States district court for the eastern district of Wisconsin, before Judge Jenkins, some time in February.

Record of American and Foreign Shipping.

It is certainly surprising that the publishers of the Record of American and Foreign Shipping, of New York, have not until this year given any attention to the great number of first class American hulls on the great lakes. Especially is this surprising when it is known that the publishers of this record, which was established nearly twenty-five years ago and is recognized as the leading American classification of vessels, must be aware of the fact that the latest report of the United States commissioner of navigation credits the lakes with more steam tonnage than the Atlantic and Gulf coasts, and more steam vessels of 1,000 to 2,500 tons than the combined ownership of this class of vessels in all other sections of the country.

The 1891 number of the Record, 23rd. issue, just received, classifies only a few lake ships but a more general classification is promised for the future, Joseph R. Oldham, of Cleveland, having been recently appointed agent for the lakes. The new issue contains the usual number of improvements and is admirably gotten up. Reports of upwards of 18,000 vessels, together with an index to compound names of vessels, a list of vessels' names which have been changed, also the names of underwriters' agents throughout the world, and other valuable information, are published therein. Its rules for the construction of iron and steel vessels are endorsed by the United States navy department and the work is approved and endorsed by the most important board of underwriters.

How to Settle the Wheel Chain Controversy.

Mr. Stanley B. Smith says that he has been greatly interested by the arguments in the REVIEW concerning the reeving of wheel chains. "Now, I suppose," he said, "that as a landsman I am not qualified to express an opinion on this matter, but I want to suggest something. It is this: that whether the chains are ship or steamboat style, I would like to have them changed so that whether put to starboard or port, the boat will steer for Stanley B. Smith & Co's coal dock on Detroit river."

An Artistic Painting.

A night scene of the Maryland is the subject of H. F. Sprague's last study, and every one who saw it was delighted. The painting represents the Maryland at sea running full speed, while the electric lights of the Fisher 400 light plant flood streams of light from the mast head, the windows of the cabins and the corners of the houses, casting their reflections in the water. The light effect is perfect. The order was executed for Mr. Alexander McVittie, of the Detroit Dry Dock Company.

MARINE REVIEW.

DEVOTED TO THE LAKE MARINE AND KINDRED INTERESTS.

JOHN M. MULROONEY, } PROPRIETORS.
F. M. BARTON, }

Published every Thursday at No. 510 Perry-Payne Building, Cleveland, O.

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NEARLY \$8,000,000 worth of property and 3,950 lives saved, 492 vessels saved from stranding and 229 vessels warned away from rocky shores, represent one year's work of 1,700 life-saving men, who patrolled 10,000 miles of sea and lake shore to accomplish this work. These men receive \$50 per month from the government during from half to three-fourths of the year. There is an effort being made by their friends to have the wages of surfmen increased to \$500 and the captains' salary to \$800. While this worthy matter is receiving attention the provision of a pension for families of surfmen who lose their lives in the service will be agitated. These men encounter storms and waves that are more powerful than any enemy engaged by our standing army, and surely the distinction of saving instead of destroying life is in their favor. Then let vessel owners, masters, engineers and everyone engaged or interested in marine affairs signify their approval of this effort. A caucus of congressmen and senators from marine districts will be held shortly, and petitions will be placed before them.

THE Associated Press and other reputable news associations continue sending out at regular intervals wild stories about companies being formed with immediate plans for having salt water ships steam up and down the great lakes. It is strange that the best newspapers print such yarns when it is known that Canada has been at work for years on improving the St. Lawrence canals in view of such a commerce, but millions of dollars must yet be spent before the crude waterways below Lake Ontario are sufficiently enlarged to admit of the passage of such boats as now navigate the Welland between Lakes Erie and Ontario. Canada is certainly aroused to the importance of these great improvements but it will be many years before the desired end can be reached even with a most lavish expenditure of money. The MARINE REVIEW a short time ago presented drawings of the canals in question showing conclusively the truth of what is said here.

IN another part of this paper will be found a communication from Col. William Ludlow, engineer of the Ninth and Eleventh lighthouse districts, who has kindly given an opinion on the question of a re-survey of the lakes in answer to a request from the MARINE REVIEW. Col. Ludlow champions the present general survey in the highest possible manner. He holds that no benefit could be derived from an entire re-survey and reviews the subject in a very interesting way. He is of the opinion that the charts might be improved in some sections and gives his views in this regard very clearly. The vessel owners and masters of the lakes have come to regard Col. Ludlow's opinions very highly and his views on this subject will undoubtedly be carefully considered.

IN a lengthy review of the ocean freight situation Bradstreets presents figures showing that conditions surrounding the carrying trade of the world are similar to those that confront the owners of lake vessel property at this time. The whole world is feeling the reaction from the boom of 1888-89 when the ship-owners reaped harvests such as they had not known for years. The British shipyards alone present 1,283,333 tons of new property for the coming years.

Cuban Ore and the Shipping Bill.

IN a recent issue of the MARINE REVIEW the attention of Lake Superior ore interests was directed to a story widely circulated in the east to the effect the bounty proposed by the shipping bill, now before congress, would about counteract the duty of 75 cents a ton on foreign ore in the case of American vessels engaged in the Cuban ore trade. It was distinctly stated in the article in question that figures regarding the extent of the bounty proposed for such a trade were not at hand and the story was referred to as being only worthy of investigation. It has stirred up the shipping enthusiasts, however, as the following communication, in addition to an editorial in the current issue of the Marine Journal, headed "The Flag Striker," "Shoot Him on the Spot," etc., will show:

806 11th St. N. W., WASHINGTON, D. C.

EDITOR MARINE REVIEW: I am astonished that you should circulate the false and deceitful statement made first in New York, that the shipping bill, if passed, would injure the lake transportation of iron ore. It seems easy enough to understand the object of inventing this falsification. An enemy of American shipping did it. Friends of foreign shipping are enemies of the shipping bill. The enemies of this bill have been inventing lies about it—in the foreign interest—ever since it was introduced. I cannot see how intelligent readers can be imposed upon by this particular lie, for readers who study statistics can, and do figure for themselves. A sail vessel that would carry "500 tons of Cuban ore" would measure 333⅓ tons capacity. The distance from Cuba may be taken at 1,000 miles. The bounty is 20 cents a ton of gross vessel measurement. The 500 ton carrier would receive \$66.66 for the voyage. Distributed to the ore, this would amount to 13.3 cents per ton. This would be paid to the vessel, and not to the owners of the ore. Foreign vessels are now carrying this ore. The 13.3 cents bounty—not 75 cents as the lie runs—would help American vessels to compete for carrying it. If they offered to carry and did carry ore for less than foreign vessels; and if freights were lowered by the competition, then the price of ore would be raised, so that it would be sold in the United States at the same price as before. The most difference that could be made would be but 13 cents a ton; and if this could be done, it would argue that our vessels did not need the bounty in order to enter the trade. As this is not the case, our vessels needing the bounty to equalize their footing with foreign vessels, it is plain there would be no reduction of freights worth mentioning, and no reduction on the price of ore. At any rate, it is the business of the tariff to regulate the importation of ores, and not the business of the marine in the foreign trade. Lake vessels are protected in their ore carrying. Why should not our ocean vessels be protected likewise? It is a very short-sighted and selfish idea that the goose should be fed, but the gander must rustle for his own grub or starve. Yet that is the idea inculcated by the foxes of "free trade," cunning fellows that they are.

Our ocean shipping in the foreign trade is necessary for the commercial independence and military defence of the nation. It is necessary to give rank and character to our country. It is the only token to the world of national power. The men who would sink it should be classed with Benedict Arnold and traitors of his time. The men who would invent and circulate lies to defeat a measure for its survival and perpetuity would destroy the government and burn the flag. If, as you state, "the shipping bills present to lake commerce no benefits of a direct kind," and for that reason lake statesmen should vote against them, then it is time to strip protection from the lake marine, as it was stripped from the ocean marine in the foreign trade sixty years ago.

Respectfully yours, G. W. SAMPSON.

We accept the statement in this letter that the bounty will make a difference of only 13.3 cents a ton on a vessel of 500 tons capacity. With this understood there is little room for argument, as an investigation of the subject was all that was suggested, and it is well known that the lake marine recognizes the importance of protection to American shipping. Still, it is a matter of some importance to the Lake Superior ore interests to know that the shipping bill would virtually cut the tariff down 13 cents a ton, as the time is not far off when 50 cents a ton will be an outside margin for capital invested in mining properties. It is inconsistent to say that the bounty would be paid to the vessel and not to the ore mines. There are three companies, all American, that will be engaged actively within a year in bringing ore to this country from Cuba and they will all own their own ships. These ores will eventually enter into competition with Lake Superior ores, especially in the district east of the Alleghenies where an important trade has been built up by Lake Superior producers within the past few years.

The Ore Dealers.

Rumor had it a few days ago that some of the Lake Michigan furnace interests had made purchases of ore for next season's delivery. The report was received with doubt, however, as the Illinois Steel Company was thought to be the only western concern that might buy early and that company is now receiving large quantities of all rail ore on old contracts. Further investigation showed that the ore referred to was included in old contracts. There are no indications whatever of any sales of ore or contracts with vessel owners for next season. The coal shippers, and all lake interests in fact, are somewhat concerned in the talk of a general strike of mine workers for an eight-hour day to take place May 1, as such a move would again restrict the coal movement next season, but the matter seems too far in the future to borrow trouble on account of it as yet.

Plans for Delivering Mail on the Detroit River.

Charles F. Swan, superintendent of the free delivery at the Detroit post office, has for several years been engaged in an effort to establish a marine post office on the Detroit river for the delivery of mail matter of all kinds to passing vessels, after the plan now followed by the river reporters who deliver messages for owners. Mr. Swan has finally enlisted the support of leading post office officials who recently met in conference and will recommend this new service. After extensive correspondence last spring the MARINE REVIEW found that such a service is entirely practicable, and it can be secured by the shipping interests of the lakes giving it their attention. Thousands of dollars are paid out every season by ore shippers and vessel owners for the delivery of messages on the rivers. A great saving might be made in this respect and at the same time the business would be so enlarged as to make it much more remunerative to the people engaged in this line of work.

Decreasing Grain Stocks.

The outlook in grain for the carrying trade of the lakes is even less encouraging according to late reports. Available stocks of wheat on Jan. 17 east of the Rocky mountains amounted to only 46,443,844 bushels or 844,286 bushels less than on Jan. 10, 1891, and 6,466,876 bushels less than on Jan. 18, 1890, one year ago. The decrease of available stocks of corn was 395,322 bushels last week, the aggregate Jan. 17, being 4,973,283 bushels. As compared with the total on Jan. 18, 1890, one year ago, the decrease is 13,309,000 bushels. Available stocks of oats last Saturday equaled 5,655,283 bushels, or 404,047 bushels less than on Jan. 10, 1891 and 3,760,000 bushels less than on Jan. 18, 1890.

In General.

Palmer & Co. and Brooks & Manning, insurance agents, have both issued very neat calendars, containing excellent nautical views.

The new steel sidewheel steamer City of Toledo was successfully launched from the yard of the Craig Ship Building Company, at Toledo, on Saturday afternoon.

Supt. Kimball, of the life saving service, has just promised Duluth a life saving station. If the station is as long coming as those promised for Niagara and Ashtabula, some of Duluth's latest born may become gray before it is a reality.

Representative Van Schaick had an interview with treasury officials lately, and found them favorably disposed toward the scheme of building a new revenue cutter to take the place of the Andy Johnson. Secretary Windom deemed \$95,000 a very reasonable estimate for the construction of a new cutter, and expressed hopes that it will be authorized and complete for the World's Fair.

FOR SALE AT A BARGAIN.—The steamer George Spencer, with old ore contract for coming season. Good condition; good carrier; good tower. Apply to or address, B. L. PENNINGTON, 112 Water street, Cleveland, O.

M. E. B. A.

The sixteenth annual meeting of the Marine Engineers' Beneficial Association is now in session at Washington, with John H. Galwey, of Detroit, national president, in the chair. The committee of credentials is composed of Harrison, of New York, Reid, of Detroit, and Lawrence, of New London. At the opening of the session to-day fifty-five representatives were present, taking in the entire Atlantic and Pacific coast as well as the lakes. The report of the association was presented, after which President Galwey read his annual report, giving a complete statement of the work done during the year showing eighty-nine associations now in the order.

NOTES FROM THE DIFFERENT BRANCHES.

The annual ball of the Cleveland engineers is always a feature of special interest after the completion of arrangements for winter meetings and has invariably been a success. This year's social gathering will be the tenth of its kind and will be held in Halthorn's hall, Friday evening, Feb. 6.

Officers recently elected by No. 51, of Muskegon, are: Lawrence Kernell, president; Eli V. Barry, vice-president; Albert A. Green, treasurer; D. Eagan, financial secretary; James Ketcham, 292 Wood avenue, corresponding secretary and chaplain; D. McMillan, recording secretary; Frank White, conductor; Frank Stevenson, doorkeeper. Meetings are held every Tuesday evening in rooms at No. 33 Terrace street.

Officers of No. 72, Oswego, N. Y.: W. H. Bishop, past president; John Donovan, president; E. S. Manwarring, vice-president; Thomas Navagh, treasurer; Harry Gallagher, financial secretary; James Donovan, recording secretary; Thomas Findlay, chaplain; Thomas Navagh, 40 Lake street, corresponding secretary.

Meetings of No. 9, of Milwaukee, are held every Saturday evening at No. 55 Reed street. W. E. Elliott, chief engineer of the Goodrich Transportation Company's line is president and corresponding secretary. Other officers are: S. B. Leggatt, past president; L. H. Stone, vice-president; Frank Coons, treasurer; C. G. Oleson, financial secretary; J. Longy, recording secretary; D. Leonard, chaplain; J. Dailey, conductor; F. Huerth, doorkeeper; W. E. Elliott, representative to national convention.

Following are the officers of No. 27, of Bay City: Robert J. Hannon, president; Homar Gregory, vice-president; Daniel Covean, financial secretary; Robert C. Speir, 604 Eighth street, corresponding secretary; A. C. Gastung, treasurer; Louis Schnall, conductor; George Covean, chaplain; Peter Deihl, inside doorkeeper; Martin Lacy, outside doorkeeper; J. R. Blanchett, delegate to national convention.

M. E. B. A., No. 44, of Manistee, Mich., meets every Tuesday evening in the F. C. Larsen building. The address of the corresponding secretary is A. McKee, No. 34 Arthur street. No. 44 sends us an invitation to its fourth annual ball, to be held at the Manistee opera house on the 30th inst. for which we return thanks.

Cleveland Matters.

Capt. E. M. Peck and Capt. James Millen, of Detroit, were in the city yesterday.

On account of the transfer of Capt. Millen, of Detroit, to one of the steel boats of the Lake Superior Iron Company, Capt. Miner, of the schooner Iron Chief, will be advanced to command of the steamer Iron King.

Advices from Washington say that Henry Howard and Gen. Hartsuff appeared before the house committee on commerce, Tuesday, in opposition to the raft bill. They insisted that a raft 150 feet wide and 2,000 feet long could easily go through the St. Clair and Detroit rivers without obstructing navigation.

Mr. A. W. Goodrich, president of the Goodrich Transportation Company, was in the city during the week, in consultation with General Manager Pankhurst, of the Globe Iron Works Company, with reference to the two big passenger boats building here for the Goodrich company.

G. F. Sheldon and Captains Downs and Starkey, of Ashtabula, who contemplate running a boat for passenger and freight service between Cleveland and Ashtabula tried to get the propeller Ossifrage but arrived in Bay City just a few hours after Mitchell & Co., agents of the Cleveland & Lakeside Transportation Company had secured her by telegraph.

Cleveland Vessel Owners' Association.

Captain George P. McKay will serve as secretary and treasurer of the Cleveland Vessel Owners' Association for another year, and Mr. M. A. Bradley has been elected vice president. These changes with an increase in the tonnage tax to 3½ cents a ton are the important features of the annual meeting held Saturday. Mr. B. L. Pennington was offered a re-election to the vice presidency, but declined. The officers of the association for the ensuing year are as follows: H. M. Hanna, president; M. A. Bradley, vice president; George P. McKay, secretary and treasurer; Harvey D. Goulder, counsel; managers of advisory board, H. M. Hanna, R. K. Winslow, H. P. Lillibridge, P. G. Minch, M. A. Bradley, W. D. Rees, George P. McKay, J. H. Palmer, Thomas Wilson, W. C. Richardson, J. W. Moore, James Corrigan; executive committee, H. M. Hanna, M. A. Bradley, Thomas Wilson, J. W. Moore, James Corrigan, Geo. P. McKay, B. L. Pennington. Shipping masters—A. R. Rumsey, Cleveland; Fred Bennett, assistant, Cleveland; William Rennick, Ashtabula Harbor. The appointment of shipping masters at Toledo and Fairport was left with the executive committee. Hereafter the business of the association at Toledo will be conducted through the Cleveland office, but a shipping office will, of course, be located at that port. The report of the secretary and treasurer showed a deficit of about \$800 for the year, on account of extraordinary expenses attending the strike of firemen last season and the necessity of sending a delegation to Washington to object to the passage of the load line bill. This deficit will be met by the assessment for the coming year which will more than meet ordinary expenses, but it was thought best to increase the rate to 3½ cents, so as to have money enough in the treasury to meet any emergency that may present itself. The association tendered Congressman Burton a special and earnest vote of thanks for the manner in which he acquainted himself early with the needs of lake navigation and for the attention given to detail in matters of lake interest. In 1890 there were represented in the association 138 steamers and 132 consorts and sail vessels, with an aggregate tonnage of 245,708 tons, while in 1889 there were 106 steamers and 105 consorts and sail vessels, with an aggregate tonnage of 191,829 tons; making an increase in 1890 of 32 steamers and 27 consorts and sail vessels with a tonnage increase of 53,878 tons. The committee appointed at the last meeting to confer with the commission of United States engineers, who are investigating the encroachments on the Cuyahoga river, asked for more time before handing in a report, and it was granted. The committee is composed of Captain Joseph Doville, Capt. Edward Morton, M. A. Bradley, and H. D. Goulder. Capt. McKay's salary as secretary was increased to \$1,000, in order that he might employ some help in the clerical work.

Following the meeting of the Cleveland Vessel Owners' Association, Saturday, two of the most important questions now demanding the attention of lake navigators were taken up and discussed by both owners and masters. The questions were the proposed change in the fog signal from one to three blasts, so as to avoid the present danger of conflict with the porting signal of one blast, and the matter of having wheel chains on all steamboats rove, so as to have the wheel turned in the direction it is desired to have the vessel's head swing, thus bringing about a uniformity of steering on all crafts. The Cleveland captains had been invited to the meeting by Capt. William S. Mack, who is a member of the vessel owners' association, and among the gathering were such well known officers as James Stone, John Nelson, J. B. Hall, Geo. P. Malory, C. E. Benham, John Lowe, William Cumming, Robert Cowley, John Peterson, James Nicholson, Frank Brown and others. Mr. H. M. Hanna, president, and Mr. Harvey D. Goulder, counsel of the association, entered into the informal talk which was very interesting and instructive. Numerous cases were cited where vessel masters found themselves in the utmost danger on account of their inability to determine whether the one blast of the whistle which they heard—hearing was all they could rely upon—was a fog signal or a warning from the man ahead that he was directing his course to

port. Several of the captains related instances where escape from collision on account of this conflict in signals seemed almost miraculous, and all agreed that many of the late heavy losses were due to the fog signal being similar to the porting signal. They were always relieved when they heard two blasts of the whistle ahead, as they knew what they were doing when they answered such a signal.

Mr. Harvey D. Goulder gave the most interesting talk on the subject, and he was listened to with a great deal of interest by the captains themselves, on account of his experience in admiralty cases and his thorough knowledge of navigation matters. "Not long ago," he said, "I had an important collision case presented to me and, after summing up the evidence, I said to my clients: 'If the owners of the other boat in this case come in and swear that the one blast of a whistle which was heard on your boat was a passing signal we can recover damages. On the other hand, if they say it was a fog signal that they were blowing, no court on earth will give you more than a division of damages.' The two passing signals should be emancipated from all other signals, let the fog signal be what it may. I have argued this in and out of court, and the necessity for a settlement of the question grows more urgent every day. The tendency among the authorities is to hold that when there is not a clear understanding, it is the duty of the master to not only check his boat but to bring her to a standstill and even reverse the engines. But supposing this rule is followed, what redress has the man who stops his boat if the other fellow comes along and, after running into him, says I was blowing a fog signal all the time and never heard your whistle."

A committee was appointed to urge upon the Lake Carriers' Association the necessity of taking up and recommending to the steamboat inspectors at its annual meeting these proposed changes.

Paying Too Much for the Whistle.

The list of the larger losses on the lakes during the last season foots up to \$893,500 on hulls, and \$224,150 on cargoes, or an aggregate of \$1,117,650, the losses in freight cargoes not being counted. According to the report of the commissioner of navigation, there were 3,510 lake vessels of 1,063,064 tons on June 30, 1890. Considering only the losses on hulls, it appears that the average loss per ton was \$0.84—\$894,500 divided by the tonnage 1,063,064. The shipping season lasted about seven and a half months, but half of this time being spent in port in loading and unloading, the time that vessels were actually at sea is reduced to three and three-quarter months, or 112½ days sea service, for which the loss equaled \$0.84 per ton. From the report above referred to (p. 122 & 123) it appears that the American vessels employed in the California grain trade between San Francisco and Europe suffered a loss of \$0.23 per ton on hulls, during a voyage of 125½ days. Comparing both fleets by reducing the rate of each to 100 days, we obtain for lake vessels \$0.747 and for the California fleet of \$0.83. In other words, the loss on lake vessels has been four times larger than the average loss on the California grain fleet of 418 vessels during the four years from 1881 to 1885. The voyage around Cape Horn is, according to the testimony of the navigators, the most perilous, but despite this fact, the losses are only one-fourth of those on the lakes. As it cannot be said, that lake vessels are inferior in build to any vessels in the United States, the great difference in the rate of losses on hulls must be wholly attributed to inferior management and seamanship. If of \$1,000,000 lost on the lakes, only \$1,000, that is the one-thousandth part of it, would have been spent to increase the knowledge of lake masters and mates in navigation, half a million dollars out of every million might have been saved.

JOHN MAURICE.

[Our correspondent reasons well as far as the figures are concerned, but he makes no allowance for the fact that the great bulk of losses on the lakes were due to stranding in shallow connecting waterways and collisions in narrow channels. These are disadvantages from which vessels in the California grain trade are comparatively free.—ED.]

More millionaires live in Manistee, so it is claimed, than in any other city of its size on the lakes. However this may be it is certain that no city of its size can produce an engine building establishment of equal capacity, and having as convenient a plant as that of the Manistee Iron Works. The machine shop is 120x60 and the foundry 100x80, besides there is a large blacksmith shop. The first two buildings are fitted with traveling cranes, by which three men have lifted eleven tons, the capacity of each being fifteen tons. They manufacture their own heavy machinery. The marine work in their shop consists of two engines to be compounded. One will have the large cylinder on top. It is for parties who have tried an engine constructed that way at these works and it has given entire satisfaction. They are also figuring on some new work.

Affairs in Admiralty.

IMPORTANT LAKE CASES.

The famous North Star-Sheffield collision case will go to the United States Supreme Court, the legal representatives of the North Star being now engaged in work preparatory to filing bonds with this end in view. The decision by Judge Brown, of Detroit, now Chief Justice Brown, was for a division of damages, the Sheffield being lost. It is not thought that Justice Brown's previous connection with the case will be any bar to his sitting with the other members of the supreme bench in this as in all other cases. An appeal is also expected in the raft case of the owners of the schooner H. C. Richards against the owners of the tug International, decided last week by Judge Ricks, of the federal court at Cleveland, and reported very fully in these columns. The decision gave the rafting business a decided setback, but the owners of the raft hope to find testimony to show that there was room enough between the docks on the side of the channel for the Richards' tow to get through.

Judge Ricks, of Cleveland, decided another important admiralty case last week in which the question of suction had a great bearing. It was the Devereaux-Mitchell collision case and it will undoubtedly have some influence on the Siberia-Ohio collision and other cases in which the question of suction is involved. Aug. 13, 1890, the steamer J. H. Devereaux was proceeding down the lakes on a voyage from Marquette to Cleveland and about 7:20 o'clock in the morning entered the natural channel below the dredged cut in Lake George. The steamer Alexander Folsom, having in tow the schooner Mary B. Mitchell and another craft, entered the lower end of the narrow channel bound up the river. All three of this tow carried full sails and the breeze was very stiff. Signals were interchanged but, in attempting to pass, the Devereaux and the Mitchell came in collision and the former was so badly injured that her owners filed a libel for over \$18,000 against the Folsom and Mitchell, and alleged six specifications of negligence against the Folsom and seven against the Mitchell. Harvey D. Goulder was libellant's proctor and H. S. Sherman with F. H. Canfield, of Detroit, appeared for the defense. Judge Ricks decided for the libelants and appointed District Clerk H. F. Carleton commissioner, to take testimony and assess damages. The court's review of the testimony was very exhaustive and full. In stating his conclusions he said:

"With conclusions of fact found by the court in which Captains Kelley and Mallory, the nautical assessors who have patiently heard this protracted case with me, fully agree, I have taken their advice and opinion as to the expert questions of seamanship involved. We all agree that there is such a natural force in navigable waters described as suction by the expert witnesses in this case, that such force would be caused by two steamers passing in that narrow channel at the speed and under the circumstances developed by the testimony in the case, and that it would naturally have the effects on one of the vessels as shown in the case of the Devereux on this occasion. The sudden and violent sheer of the Devereaux would not likely be caused by any other force or influence, and that her master from the moment she began to sheer directed her movements in a skillful and seamanlike manner. We are further of the opinion that the tendency to sheer from suction in that channel by vessels passing under the conditions of this case was so well known by skillful seamen that the master of the Mitchell should have considered it possible if not probable on the part of the Devereaux and have so far guarded against it as to have had his own vessel in perfect control and her wheel in the starboard so as to have headed his vessel to port and have been able to put her in that course promptly when the emergency made it necessary. We are also of the opinion that with the wind blowing with the velocity and from the direction heretofore stated, it was gross

neglect on the part of the master of the Folsom to have towed his consorts through the channel with sails set and drawing as hereinbefore found. The speed at which the said Folsom and tow were proceeding was too great; it contributed mainly to cause the suction which drew the Devereaux from her course and was the proximate cause of the collision. The Devereux was without fault and was managed at the time with proper prudence and skill.

In cases involving questions of fact only depending on conflicting evidence, and the creditability of witnesses, the circuit court in admiralty will not disturb the decrees of the district court, where there is no preponderance of evidence, and no additional evidence offered on appeal—J. Pardee, circuit court, Louisiana.

Where a tug, having the right of way over a ferryboat on a crossing course, whistled to indicate that she would cross the bow of the ferryboat, but immediately changed her wheel to swing away from the ferryboat, and continued swinging until the vessels collided, it was held by Judge Benedict, of the United States district court, eastern district of New York, that the collision was the fault of the tug in not holding her course.

Excelsior Marine Benevolent Association.

At the regular meeting of No. 2, of Port Huron, on the 22nd inst., the following officers were installed for the ensuing year: John Ivers, president; C. S. Geel, first vice-president; John Cotton, second vice-president; Thomas Cowan, treasurer; W. A. Ashley, recording and financial secretary; A. C. May, marshal; Archie Moir, chaplain; L. F. Vowrie, warden; Lew Carey, sentinel. This branch now has a membership of sixty-seven, and there are several applications awaiting action at the next regular meeting.

The following pleasant communication comes from Secretary Weeks, of Bay City lodge, E. M. B. A., No. 5. It sets forth the tender appreciation in which the officers are held: "We have just located in our new rooms in the Watson block, a very pleasant building looking up the entire length of the business portion of Centre avenue. The lodge, though in its infancy, is in a flourishing condition, and we feel very much flattered over our prospects. We are getting all the prominent steamboat captains in as fast as they can find it convenient to put in applications. At our annual meeting, held Jan. 19, we elected the following officers for the ensuing year: D. M. Pierce, president, his own successor, a very efficient and genial officer, who brings harmony and success to our institution; Capt. Henry Bennett, vice-president, whose genial spirit always makes social sunshine; Capt. John S. McNeil, second vice-president, whom we all swear by and hope to continue in so doing for many moons to come; Capt. George Lester, treasurer, whose red cheeks light our little hall, though the evening sun has passed down the hillside. We have in addition to the above named officers Capt. E. I. Ballentine, the happy heavy weight marshal, with Capt. E. M. Soph, the military like sentinel, with our hustler, Capt. John Jenkins for warden.

"We have eighteen members in addition to officers: They are Captains P. G. Sower, George Smith, J. W. Jordan, John Cassada, Alfred Forrest, Herman Bennett, John Stone, George W. Ryan, Thomas Crohn, Byron Armstrong, H. H. Townsend, John Sterling, Richard O'Connor, J. B. Pierce, Samuel Murdock, George H. Phelps, John Hutton, Louis King, John W. Surles, in all to this date twenty-seven members."

An effort is being made to establish a lodge at Milwaukee. There are about thirty masters who are eligible and are expected to become members. The popularity of the Whale club is, however, against the establishment of a prosperous benevolent organization. The Whale's added to their membership last week Capt. W. B. Scott, of the steamer J. L. Hurd; Capt. C. C. Christenson, of the schooner Elida; Capt. James O'Brien, of the steamer R. A. Seymour, and Capt. Hans L. Wanrig, of the schooner Penobscot.

At the meeting Saturday of Buffalo lodge, the following named masters were initiated: James Todd, Fred. E. Hale, William Williams, and W. E. Clarke. The application of Capt. Daniel Coughlin for membership was referred. At the previous meeting W. S. Smith and Ben. Leman were initiated. The lodge feels very thankful to Capt. Thomas Maytham for a donation of 400 volumes of new books—history, fiction, sea stories, marine law, shipping affairs, etc., and an Unabridged Webster's Dictionary. The books are all first class, and make up a fine library.

VESSEL AND MACHINERY EXCHANGE.

Space under this heading may be used gratis by our advertisers or subscribers to call attention to vessels or any craft, machinery, new or second hand, that they may have for sale. Those wanting machinery of any kind, or wishing to purchase vessels, are invited to take advantage of the same offer. Each item will be limited to three lines. Letters concerning same must mention number attached to item and be addressed MARINE REVIEW, 510 Perry-Payne Building, Cleveland, O.

21—STEAMER, A2, 171 keel, 29 feet 2 in. beam, 10 feet 9 in. hold, insurance valuation \$30,000, for sale.

22—STEAMER FOR SALE—1,362 net registered tons, A2, and insurance valuation \$75,000.

23—FOR SALE—Propeller built by Wheeler in 1881, capacity 1100 tons.

24—WANTED, A2 steamboat, to carry 400,000 to 500,000 feet of lumber. Machinery and boiler must be fitted for towing.

25—FOR SALE or Exchange for Real Estate—Steambarge Mineral Rock, and barges Sweepstakes and Saml. Boltón, lumber capacity 300, 400 and 500 m., respectively.

26—THREE good harbor tugs for sale.

27—FOR SALE—Partially constructed hull of about 130 tons. Cost \$1,400

28—WANTED—Harbor tug 16 x 16 or 18 with lots of steam.

29—FOR SALE—Ten steambarges, nine tugs, twelve schooners, fourteen tow barges, and four scows.

30—NEW BARGE—Ready for machinery, but rigged for tow barge, and steambarge rating A2 with 475 m. capacity, for sale.

31—FOR SALE—Sloop Cabin Yacht, length 30 feet, beam 9 feet.

32—WANTED—Steambarge in the lumber and coal trade, to tow the A. T. Bliss and Thos. Cahoon.

33—FOR SALE—Six Steambarges, 400 to 1200 tons capacity; Six Schooners, 800 to 1400 tons capacity; Twelve Schooners, canal size; Four Lumber Barges, 350 to 400 M. ft. capacity; Two River Tugs; Two Harbor Tugs.

34—FOR SALE—Scow Jay Bird, rebuilt in 1890, good fit out, 50 tons burden.

35—FOR SALE—24 x 26 cylinder with heads, piston, valves, link, and eccentric rods. Good condition, second-hand, from barge A. D. Haywood.

36—FOR SALE—First class yacht, cabin sloop 32 foot, winner of fourteen prizes, reasonably cheap.

37—WANTED—Steambarge to carry 800 to 1000 tons, must be cheap and in good condition.

38—WANTED—Good tug, from 55 to 70 feet long.

39—FOR SALE—Two tugs; one is 63 feet long, and has 14 x 19 engines, and the other is 40 feet long, and was built two years ago

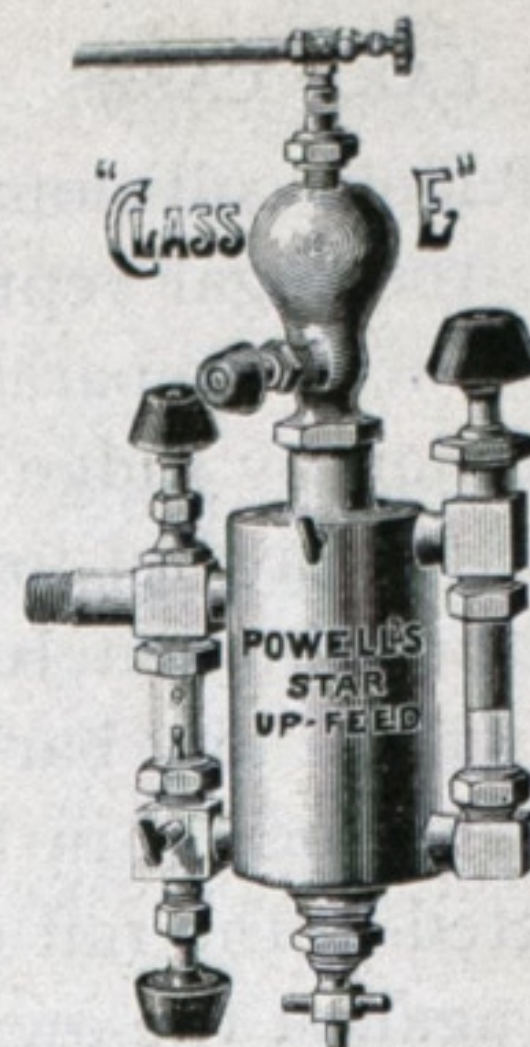
40—FOR SALE—Steamer George Spencer, with old ore contract for coming season.

41—FOR SALE—Two fire box marine boilers, 6½ ft. by 13½ ft., allowed 90 pounds steam, deep furnace, suitable for wood or coal, in good order.

OFFICE OF U. S. LIGHT-HOUSE ENGINEER, Ninth and Eleventh Districts, Detroit, Mich., January 17, 1891. Sealed proposals will be received at this office, until 4 o'clock p.m. on Monday, the 2d day of February, 1891, for furnishing the material and labor necessary to completely construct and deliver at Light-house Depot, Detroit, Mich., the metal work required for 5 circular iron oil-houses. Plans, specifications, forms of proposal, and other information may be obtained on application to this office. The right is reserved to reject any or all bids, and to waive any defects. WILLIAM LUDLOW, Light-house Engineer. J29

PROPOSALS FOR BUILDING TUG, Dredge and Scows. United States Engineer Office, 157 Ottawa Street, Grand Rapids, Mich., January 17, 1891. Sealed proposals, in triplicate, will be received at this office until noon of Tuesday, February 17, 1891, for building and furnishing complete one (1) tug, one (1) dredge, and five (5) dump scows. Preference will be given to materials of domestic production and manufacture, conditions of quality and price (import duty included) being equal. Attention is invited to Acts of Congress approved February 26, 1885, and February 23, 1887, vol. 23, page 332, and vol. 24, page 414, Statutes at Large. The Government reserves the right to reject any or all proposals. For information and blank forms, address as above. WILLIAM LUDLOW, Major, Corps of Engineers, Bvt. Lieut. Col. U. S. A. F-5

PROPOSAL FOR HARBOR WORK, U. S. Engineer Office, Buffalo, N. Y. January 2, 1891. Sealed proposals, in duplicate, for the following harbor work, will be received at this office, until 2 p.m., on Monday, the 2d day of February, 1891, and opened immediately thereafter in presence of bidders: Improving harbor at Erie, Pa.; building and placing cribs and superstructure of about 450 feet extension of North Pier; improving harbor at Dunkirk, N. Y.; rebuilding superstructure of parts of the detached Breakwater and West Pier; building and placing one crib and building about 175 feet of superstructure of West Pier; improving harbor at Olcott, N. Y.; rebuilding parts of superstructure of piers. The attention of bidders is invited to Acts of Congress, of February 23, 1885, and February 23, 1887, Vol. 23, page 332, and Vol. 24, page 414, Statutes at Large. Preference will be given to articles of domestic production or manufacture, conditions of quality and price being equal. Specifications, general instructions to bidders, and blank forms of proposals will be furnished on application to this office. The United States reserves the right to reject any or all bids. AMOS STICKNEY, Major of Engineers, U. S. Army. Jan 8, 15, 22, 29

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SIX STEAMBARGES, 400 to 1200 tons capacity.

SIX SCHOONERS, 800 to 1400 tons capacity.

TWELVE SCHOONERS, canal size.

FOUR LUMBER BARGES, 350 to 400 M feet capacity.

TWO RIVER TUGS. TWO HARBOR TUGS.

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New York and Pittsburg Express	†5 15 AM	*8 10 AM
Pittsburg Accommodation.....	*12 45 PM	*11 25 AM
New York & Pittsburg Limited.....	*9 55 AM	*2 55 PM
Mantua Accommodation	*7 20 PM	*4 20 PM
Youngstown Express.....	†9 10 PM	†6 00 PM
New York & Pittsburg Express... ..	*6 50 PM	*11 00 PM
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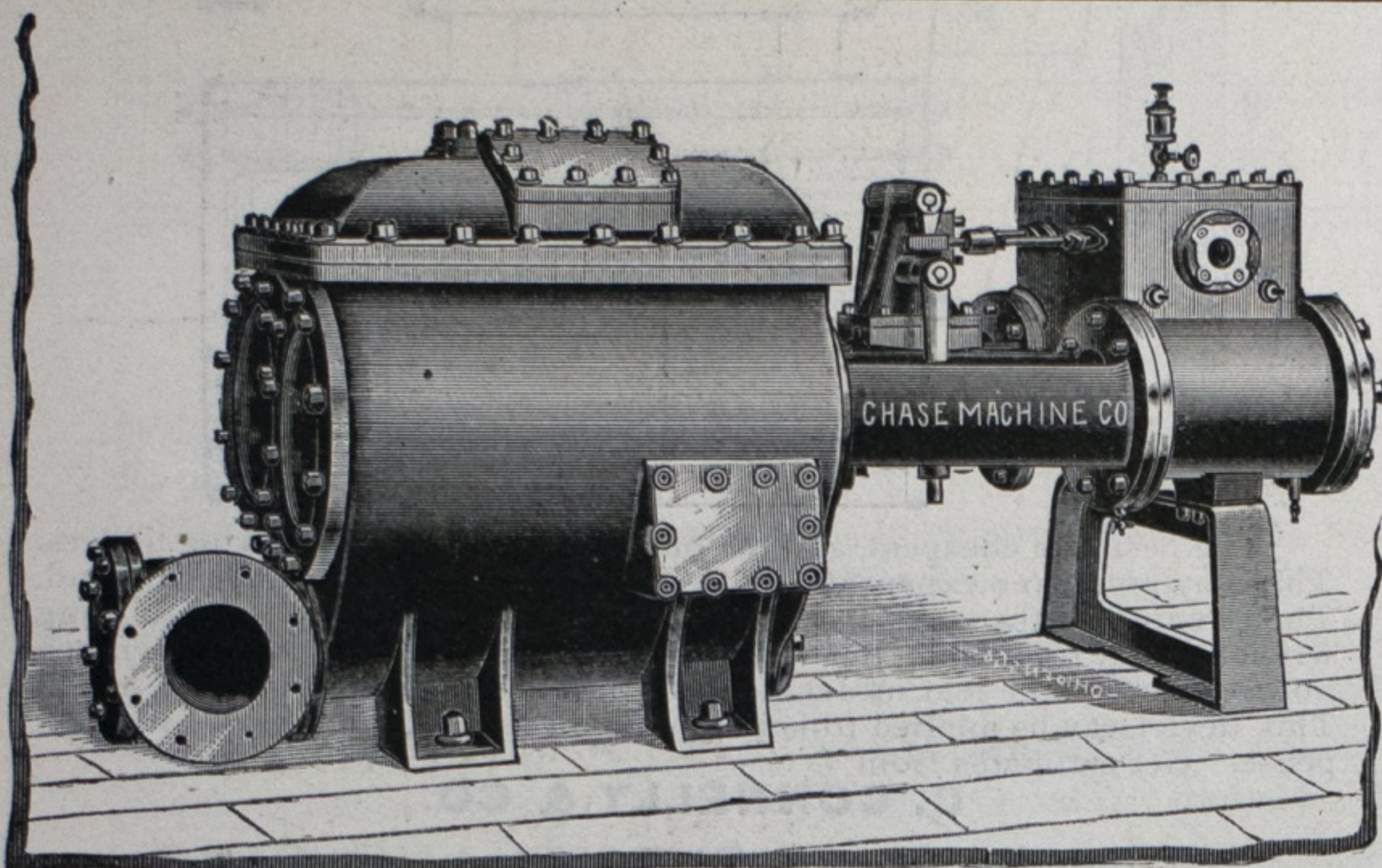
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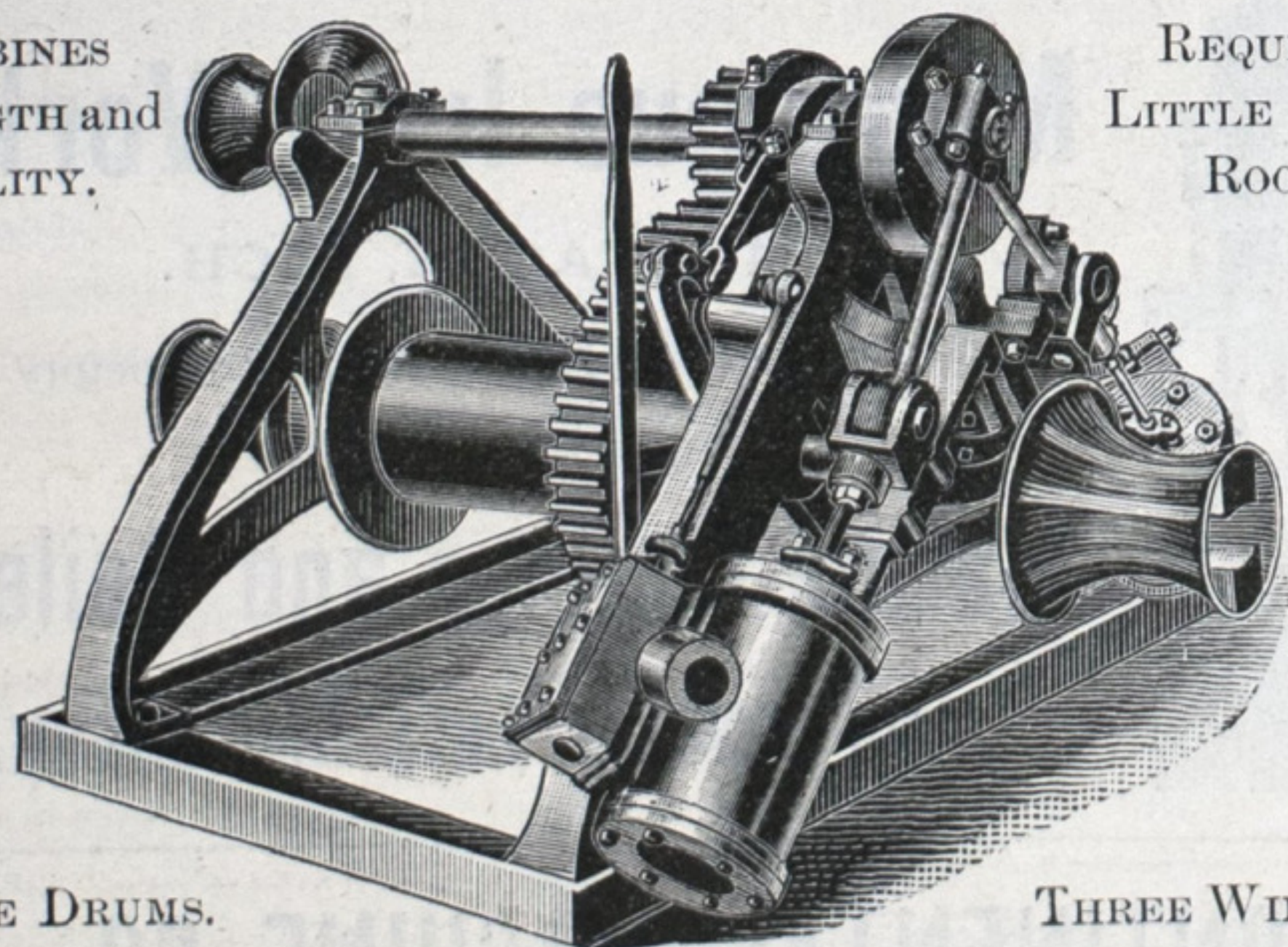
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Clark Dry Dock Co.	Detroit, Lower Docks,.....	{ 360 220	{ 68 42	10½ { 9 upper 11½ { 10 end.	Watchman at Dock will call Superintendent.
Detroit Dry Dock Co.	Detroit, Upper Docks,.....	{ 239 300	{ 42 56	{ 8 12	Watchman. Will call Sup't.
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Cleveland, O., Jan. 6, 1891.
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GENTLEMEN: I had occasion on the 13th of November to use your Extinguisher on board the steamer Queen of the West, of Cleveland. A large lamp used for signal purposes aft, fell about twenty feet and set fire to the whole roof of the engine room. I do not know what the consequences would have been but for the prompt and effectual way in which your extinguisher put out the fire, as the wind was blowing hard and a heavy sea running at the time. I heartily recommend your machine as a fire extinguisher on all classes of steamships. Yours truly,
JOS. A. NICOLSEN, Master Str. Queen of the West.

182 24th Street,
MILLER CHEMICAL ENGINE CO. Detroit, Mich., Jan 12, 1891.
DEAR SIR: Going up Lake Huron last fall during a heavy gale of wind and a big sea running, a fire broke out in one of the rooms of the steamer Fayette Brown, through the accidental upsetting of a lamp among some papers, and had gained considerable headway before discovered. By the prompt use of one of your Chemical Engines it was quickly subdued, and I think there was less than a pint of the fluid used. Have no doubt the fire would have given us lots of trouble without some such prompt and easy way of extinguishing it. Since that time I do not think a steamboat properly fitted out without the Miller Chemical Engine. Yours truly, C. H. BASSETT, Master Str. Fayette Brown.

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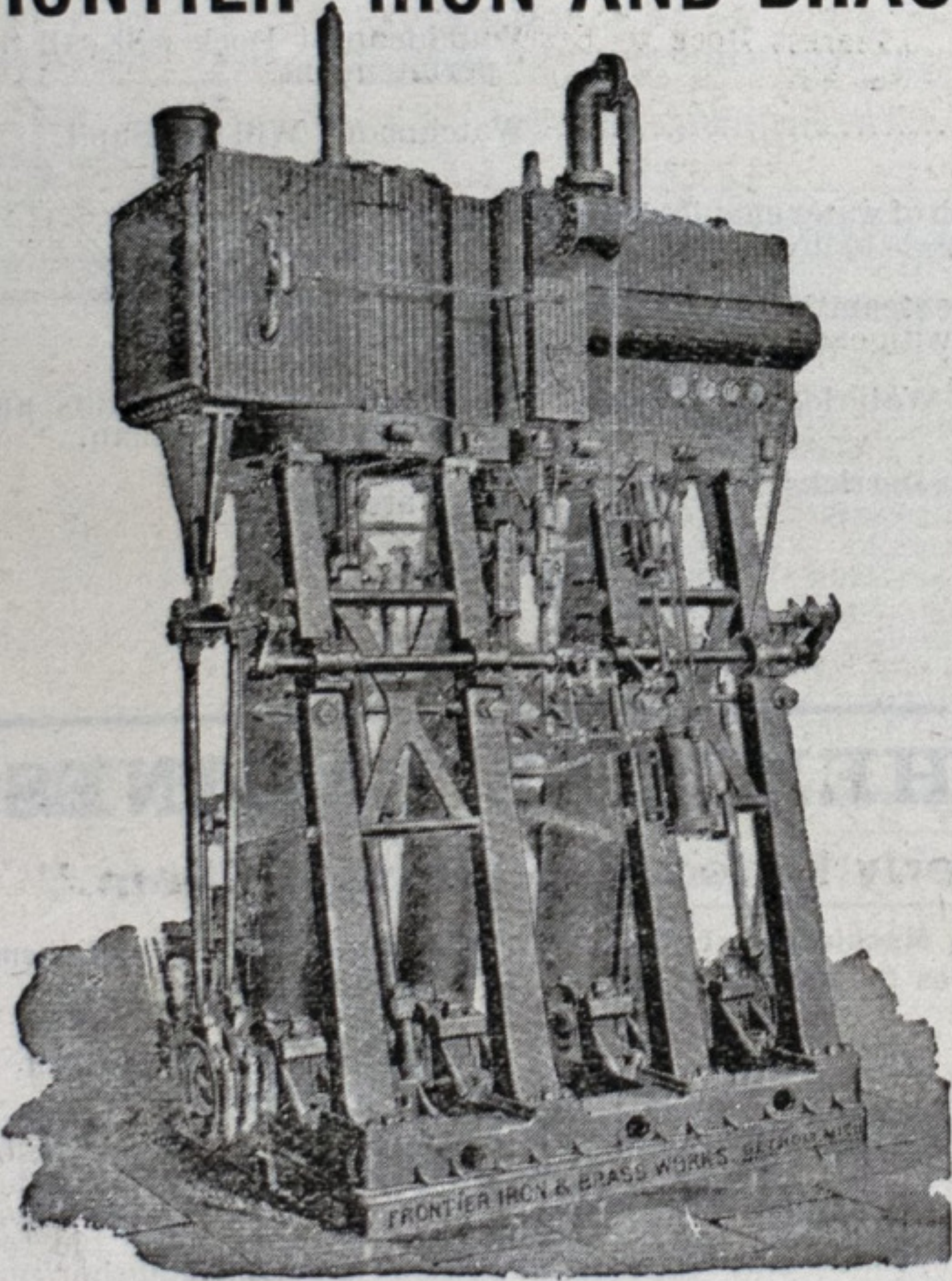
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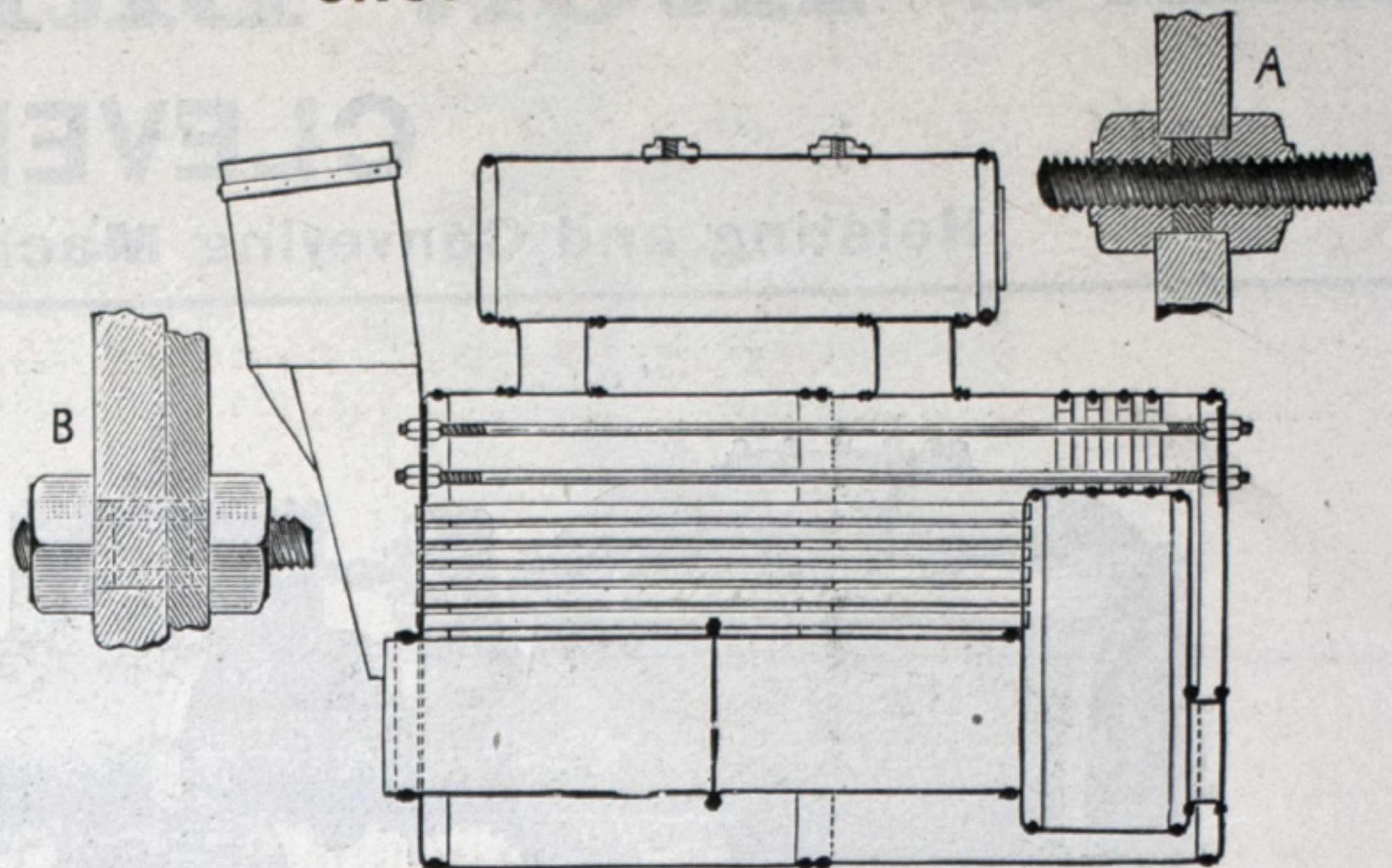
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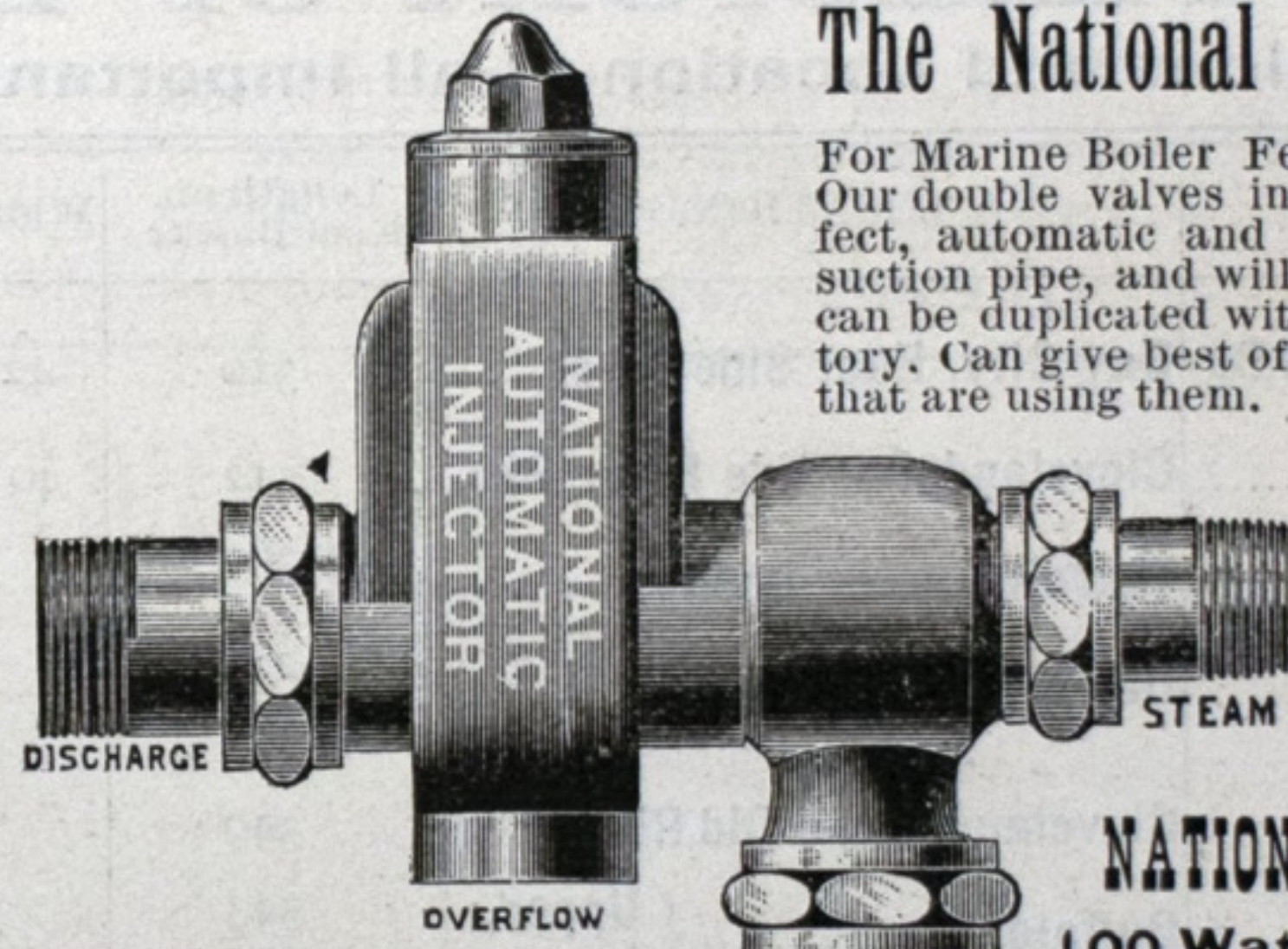


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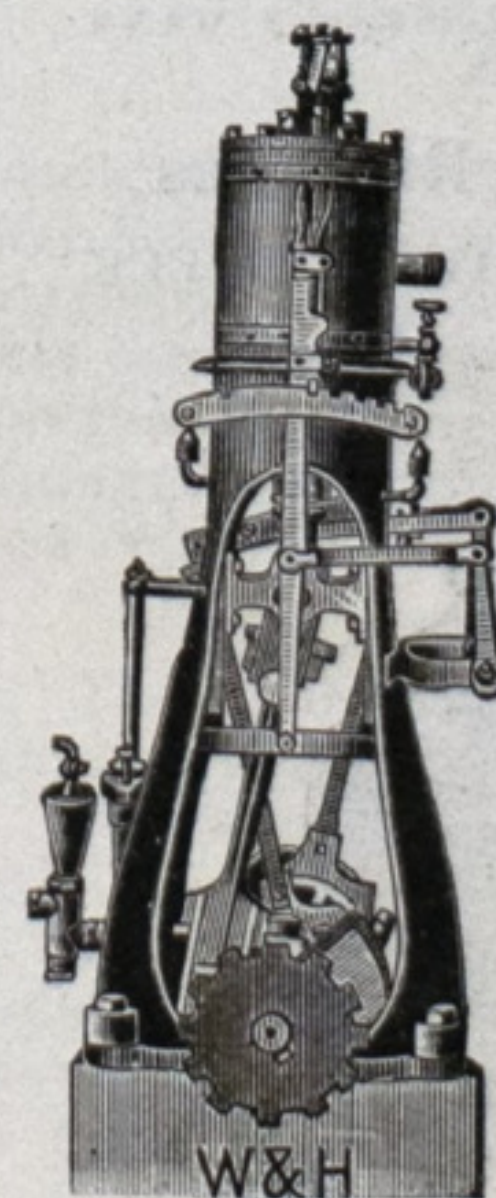
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